CLAIMS

1. A method in a receiver unit (12) intended to receive communication signals from a transmitter unit (11) via a multipath channel (14),

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estimating parameters of a channel filter function of said channel from said received communication signals from the transmitter unit (11),

sub-dividing the channel filter function into two or more parts, a function of which representing an approximation of the estimated full channel filter function,

representing the complex parameters of at least a selection of said parts of the channel filter function as actual parameter values, or as incremental values indicating the difference to a reference value,

composing a channel measurement message to be transmitted to the transmitter unit (11) of a portion including said parameter representations and a portion indicating the manner of representing said parameters.

2. The method according to claim 1, whereby said function performs a summing of the sub-divided parts of the channel filter function.

3. The method according to claim 1 or 2, whereby the sub-divided parts of the channel filter function comprise channel information of a ranked degree of significance.

4. The method according to one of claims 1-3, whereby the channel filter function is represented as a channel impulse response in the time-domain.

5. The method according to claim 4, whereby the complex parameters of the channel impulse response are reproduced as amplitude and phase values.

6. The method according to claim 4, whereby the primary sub-divided filter function includes a representation of one or more of the most significant channel components.

7. The method according to claim 6, whereby the most significant channel component is the component having the shortest delay.

8. The method according to one of claims 1-3, whereby the channel filter function is represented as a channel frequency response in the frequency-domain.

9. The method according to claim 8, whereby a complex parameter of the channel frequency response is reproduced at least as an amplitude value and optionally by an additional phase value.

10. The method according to claim 1, whereby the complex parameters of said parts of the channel filter function are represented by their actual values in case of a significant change compared to a previous reference value.

11. The method according to claim 10, whereby the reference value corresponds to a previous channel parameter representation.

12. The method according to claim 10, whereby the reference value corresponds to a modelled estimate of the channel filter function.

13. The method according to claim 12, whereby the modelled estimate is a interpolation of the channel filter function from the complex parameters of the channel filter function.

14. The method according to claim 12, whereby said modelled estimate of the channel filter function has been received by the transmitter unit.

15. A message format for representing a channel filter function,

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a first portion (32) representing each of the complex parameters of the sub-divided parts of the channel filter function by at least an amplitude value and optionally by an additional phase value.

16. The message format according to claim 15, further comprising

a second portion (31) comprising an indication of the manner of representing said complex parameters including at least an indication α (312) denoting the influence of previously measured parameter values.

17. The message format according to claim 16, whereby α is a binary value.

18. The message format according to claim 16 or 17, whereby said second portion comprises an indication of the domain within which the channel filter function is represented.

19. The message format according to one of claims 16-18, whereby said second portion (31) includes an indication (313) of the sampling period for the complex parameter values of the sub-divided parts of the channel filter function.

20. The message format according to claim 15, whereby said representations of the complex parameters of the sub-divided parts of the channel filter function are associated to an indication (321) of a time or frequency instance.

21. An apparatus intended for processing communication signals received via a multipath channel,

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means for estimating parameters of a channel filter function of said channel from said received communication signals from the transmitter unit,

means for sub-dividing the channel filter function into two or more parts, a function of which representing the estimated full channel filter function,

means for representing the complex parameters of at least a selection of the sub-divided channel filter function as actual parameter values, or as incremental values indicating the difference to a reference value,

means for composing a channel measurement message to be transmitted to the transmitter unit including said set of parameter representations and a header field indicating the manner of representing said parameters.

22. The apparatus according to claim 21, which is integrated in a mobile user equipment.

23. An apparatus in a transmitter unit for transmitting communication signals to a receiver unit,

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means for indicating a requested representation of the content of a channel measurement message to be transmitted to the transmitter unit in terms of the manner of said representation.

24. The apparatus according to claim 23, further including means for indicating at least an amplitude value and optionally an additional phase value of the complex parameters of a modelled estimate of sub-divided parts of a

channel filter function as actual parameter values, or as incremental values indicating the difference to a reference value.

25. The apparatus according to claim 23 or 24, which is integrated in a radio base station.